Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled)

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (canceled)

Claim 5 (canceled)

Claim 6 (canceled)

Claim 7 (canceled)

Claim 8 (canceled)

Claim 9 (canceled)

Claim 10 (canceled)

Claim 11 (canceled)

Claim 12 (canceled)

Claim 13 (canceled)

Claim 14 (currently amended):

An optical apparatus, comprising:

an input port, providing a multi-wavelength optical signal;

a polarization-separating element that decomposes said multi-wavelength optical signal into first and second polarization components;

a polarization-rotating element that rotates a polarization of said second polarization component by approximately 90-degrees;

a wavelength-disperser that separates said first and second polarization components by wavelength into first and second sets of optical beams respectively; ~~and~~

an array of optical power sensors, positioned to receive said first and second sets of optical beams; and

~~wherein said optical apparatus further comprises~~ a modulation assembly, which is adapted to modulate said first and second sets of optical beams prior to impinging onto said array of optical power sensors, such that said first and second sets of optical beams impinge onto said array of optical power sensors in a time-division-multiplexed sequence.

Claim 15 (canceled)

Claim 16 (currently amended): The optical apparatus of claim ~~15~~ 14 wherein said modulation assembly comprises first and second shutter-elements.

Claim 17 (original): The optical apparatus of claim 16 wherein said first shutter-element comprises an element selected from the group consisting of liquid crystal based shutter elements and MEMS based shutter elements.

Claim 18 (original): The optical apparatus of claim 17 wherein said second shutter-element comprises an element selected from the group consisting of liquid crystal based shutter elements and MEMS based shutter elements.

Claim 19 (original): The optical apparatus of claim 16 further comprising a control unit, in communication with said first and second shutter-elements.

Claim 20 (currently amended):

An optical apparatus, comprising:

an input port, providing a multi-wavelength optical signal;

a polarization-separating element that decomposes said multi-wavelength optical signal into first and second polarization components;

a polarization-rotating element that rotates a polarization of said second polarization component by approximately 90-degrees;

a wavelength-disperser that separates said first and second polarization components by wavelength into first and second sets of optical beams respectively;

an array of optical power sensors, positioned to receive said first and second sets of optical beams; and

a modulation assembly, which is adapted to modulate said first and second sets of optical beams prior to impinging onto said array of optical power sensors, and which

~~The optical apparatus of claim 14 wherein said modulation assembly~~ comprises first and second modulating elements, adapted to cause said first and second sets of optical beams to carry distinct dither modulation signals upon impinging onto said array of optical power sensors.

Claim 21 (original): The optical apparatus of claim 20 wherein said first modulating element comprises an electro-optic intensity modulator.

Claim 22 (original): The optical apparatus of claim 21 wherein said second modulating element comprises an electro-optic intensity modulator.

Claim 23 (original): The optical apparatus of claim 20 further comprising a control unit, in communication with said first and second modulating elements.

Claim 24 (original): The optical apparatus of claim 20 further comprising a synchronous detection unit, configured to detect said dither modulation signals.

Claim 25 (currently amended):

An optical apparatus, comprising:

an input port, providing a multi-wavelength optical signal;

a polarization-separating element that decomposes said multi-wavelength optical signal into first and second polarization components;

a polarization-rotating element that rotates a polarization of said second polarization component by approximately 90-degrees;

a wavelength-disperser that separates said first and second polarization components by wavelength into first and second sets of optical beams respectively;

an array of optical power sensors, positioned to receive said first and second sets of optical beams; and

a modulation assembly, which is adapted to modulate said first and second sets of optical beams prior to impinging onto said array of optical power sensors, and which

~~The optical apparatus of claim 14 wherein said modulation assembly~~ comprises an optical beam-chopper.

Claim 26 (currently amended):

An optical apparatus, comprising:

an input port, providing a multi-wavelength optical signal;

a polarization-separating element that decomposes said multi-wavelength optical signal into first and second polarization components;

a polarization-rotating element that rotates a polarization of said second polarization component by approximately 90-degrees;

a wavelength-disperser that separates said first and second polarization components by wavelength into first and second sets of optical beams respectively;

an array of optical power sensors, positioned to receive said first and second sets of optical beams; and

a modulation assembly, which is adapted to modulate said first and second sets of optical beams prior to impinging onto said array of optical power sensors, and which

~~The optical apparatus of claim 14 wherein said modulation assembly~~ is in optical communication with said polarization-separating element along with said polarization-rotating element and said wavelength-disperser, thereby controlling said first and second polarization components.

Claim 27 (currently amended):

An optical apparatus, comprising:

an input port, providing a multi-wavelength optical signal;

a polarization-separating element that decomposes said multi-wavelength optical signal into first and second polarization components;

a polarization-rotating element that rotates a polarization of said second polarization component by approximately 90-degrees;

a wavelength-disperser that separates said first and second polarization components by wavelength into first and second sets of optical beams respectively;

an array of optical power sensors, positioned to receive said first and second sets of optical beams; and

a modulation assembly, which is adapted to modulate said first and second sets of optical beams prior to impinging onto said array of optical power sensors, and which

~~The optical apparatus of claim 14 wherein said modulation assembly~~ is in optical communication with said wavelength-disperser and said array of optical power sensors, so as to control said first and second sets of optical beams.

Claim 28 (original): The optical apparatus of claim 14 wherein said polarization-separating element comprises an element selected from the group consisting of polarizing beam splitters and birefringent beam displacers.

Claim 29 (original): The optical apparatus of claim 14 wherein said polarization-rotating element comprises an element selected from the group consisting of half-wave plates, Faraday rotators, and liquid crystal rotators.

Claim 30 (original): The optical apparatus of claim 14 wherein said array of optical power sensors comprises a photodiode array.

Claim 31 (original): The optical apparatus of claim 14 wherein said wavelength-disperser comprises an element selected from the group consisting of ruled diffraction gratings, holographic gratings, echelle gratings, curved diffraction gratings, transmission gratings, and dispersing prisms.

Claim 32 (original): The optical apparatus of claim 14 wherein said input port comprises a fiber collimator.

Claim 33 (original): The optical apparatus of claim 14 further comprising a beam-focuser for focusing said first and second sets of optical beams into corresponding focused spots.

Claim 34 (original): The optical apparatus of claim 33 wherein said beam-focuser comprises at least one focusing lens.

Claim 35 (currently amended):

A method of optical spectral power monitoring using a polarization diversity scheme, comprising:

providing a multi-wavelength optical signal;

decomposing said multi-wavelength optical signal into first and second polarization components;

rotating a polarization of said second polarization component by approximately 90-degrees;

separating said first and second polarization components by wavelength respectively into first and second sets of optical beams; ~~and~~

impinging said first and second sets of optical beams onto an array of optical power sensors; and.

modulating said first and second sets of optical beams, respectively;

wherein said first and second sets of optical beams are modulated to impinge onto an array of optical power sensors in a time-division-multiplexed sequence.

Claim 36 (original): The method of claim 35 further comprising the step of rotating a polarization of said second set of optical beams each by approximately 90-degrees, prior to impinging onto said array of optical power sensors.

Claim 37 (original): The method of claim 35 further comprising the step of rotating a polarization of said first set of optical beams each by approximately 90-degrees, prior to impinging onto said array of optical power sensors.

Claim 38 (canceled)

Claim 39 (canceled)

Claim 40 (currently amended): The method of claim ~~38~~ 35 wherein said first and second sets of optical beams are modulated to carry distinct dither modulation signals, upon impinging onto said array of optical power sensors.

Claim 41 (original): The method of claim 40 further comprising the step of performing synchronous detection of said dither modulation signals.